Protecting Wall Street or Main Street: The Effect of Ownership Characteristics on SEC Oversight and Enforcement

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Abstract

In this study we examine whether ownership characteristics of a firm influence the likelihood of SEC oversight and enforcement. We specifically ask whether the percentage of retail ownership of a firm affects the likelihood of the firm either receiving an SEC comment letter or an Accounting and Auditing Enforcement Release (AAER). We find that retail ownership percentage is negatively associated with the receipt of an SEC comment letter. In contrast, we find a positive association between retail ownership percentage and an AAER following a restatement. These results suggests that the SEC focuses its efforts on institutionally owned firms in the filing review process. However, following the most egregious cases of misreporting that rises to the level of a restatement the SEC shifts its focus to protect retail investors.

1. Introduction

The Securities and Exchange Commission (SEC) focuses extensively on protecting retail investors and making capital markets accessible to everyone. This focus is evident in both speeches and written statements by the SEC staff. The current SEC Chairman, Jay Clayton, once said, "*Serving and protecting Main Street investors is my main priority at the SEC."* Examples of the SEC following through on this commitment include initiatives such as Regulation Fair Disclosure and the formation of the SEC's Office of Investor Education and Advocacy. What is less clear, and the issue that this paper investigates, is whether this focus on retail investors permeates the two largest divisions of the SEC, the Division of Corporation Finance (DCF) and the Division of Enforcement (DOE) in their interactions with corporate issuers.

In this paper we identify retail ownership as all shares that are not owned by either institutions or insiders. We recognize that the ultimate stakeholder of many of the shares owned by institutions are indeed individuals. However, the important distinction between the two forms of ownership is that when individuals invest through a mutual fund or pension fund, the fund managers are the ones who are selecting the actual investments. These fund managers have experience and expertise to evaluate different investment opportunities that a retail investor who is choosing her investments directly might not have. We believe this distinction is also important when employees of the SEC make statements about the importance of protecting retail investors.

The SEC is organized into five larger functional units called divisions and 24 smaller functional units called offices, each with distinct regulatory roles and functions. The five main divisions are DOE, DCF, the Division of Trading and Markets, the Division of Investment Management, and the Division of Economic and Risk Analysis.[1] These five divisions make up

[1] See Appendix A for a diagram of the SEC Organization Chart.

about 50% of the SEC's total budget in terms of both full time employees and dollars appropriated. DCF and DOE are by far the largest of the five divisions making up approximately 10% and 30% of the SEC's total budget (SEC 2018). Two primary tools that these divisions use in the corporate setting are the issuance of SEC comment letters and Accounting and Auditing Enforcement Releases (AAERs), respectively.

In this paper, we study whether the proportion of retail ownership at an individual firm is associated with the likelihood of regulatory oversight and enforcement from DCF and DOE as evidenced by an increased likelihood of receiving a SEC comment letter or an AAER. Contrary to SEC statements claiming to protect retail investors, we find that higher percentages of retail ownership are associated with a lower likelihood of receiving an SEC comment letter from DCF. In a sample of all firm years, we find no association between retail ownership percentage and the likelihood of being subject to an AAER by DOE. However, after conditioning on the presence of a restatement, we find a positive association between retail ownership and the likelihood of being subject to an AAER. These results suggest that in terms of their interaction with corporate issuers, only when corporate wrongdoing becomes particularly egregious (i.e., in the case of a restatement) does the SEC focus on retail ownership as a determinant of their resource allocation decisions.

The SEC is silent on the priorities that DCF considers when it decides which companies to select for a filing review each year. The SEC states, "To preserve the integrity of the selective review process, the Division does not publicly disclose the criteria it uses to identify companies and filings for review" (SEC 2019). Companies do know, however, that under the Sarbanes Oxley Act (SOX), Section 408, their periodic filings will be subject to review at least once every three

years. Section 408 does provide five explicit criteria for prioritizing these reviews, but none of them are directly related to ownership characteristics.[2]

In contrast to the secrecy surrounding the selection of firms for review by DCF, the SEC is quite explicit about the priorities for DOE in its Enforcement Manual (SEC 2017). However, it is unclear whether and how most of these priorities relate to protecting retail investors.[3] For example, when determining the priority for a potential investigation, the SEC Enforcement Manual states that the staff should consider whether the matter involves potentially widespread and extensive harm to investors. However, it is unclear whether the SEC staff would consider a firm with more retail ownership as having a widespread impact or a firm with more institutional ownership, where there may be hundreds or thousands of individuals who are the ultimate stakeholders in pension funds or mutual funds. Of all the priorities listed in the SEC Enforcement Manual, the one that most clearly points towards protecting retail investors is the consideration of whether the matter involves a substantial number of potential victims and/or particularly vulnerable victims. Because some of these differing priorities are likely to conflict with one another, the effect of retail ownership on the likelihood that DOE initiates an AAER against a firm is an open empirical question.

We first examine whether retail ownership is associated with oversight by DCF in the form of an SEC comment letter. We follow prior literature on the determinants of receiving an SEC comment letter (e.g., Cassell, Dreher, and Myers 2013) to construct a probit model and add our variable of interest: total retail ownership percentage. We measure total retail ownership percentage of the firm by adding total institutional ownership percentage and total insider

[2] The five SOX 408 criteria are prior restatements, stock price volatility, market capitalization, emerging companies, and material operations to a sector of the economy.
[3] See Section 2 for a more thorough discussion of the DOE priorities listed in the SEC Enforcement Manual.

ownership percentage and assume the remaining ownership percentage is composed of retail owners (i.e. *Retail%* = 1 – (*Inst%* + *Insider%*)). We control for insider ownership percentage so that we can interpret the coefficient estimate on retail ownership as the effect of trading off institutional ownership for retail ownership. We find a negative and significant association between retail ownership percentage and the likelihood of an SEC comment letter.

This initial finding is purely an association in an unconditional sample. In an effort to triangulate these results we next examine the subset of firm-years where a comment letter is present and investigate the relation between retail ownership and both the number of rounds and the calendar time needed to clear the SEC comments. Here we find that retail ownership percentage is negatively associated with the number of rounds and duration of the comment letter process. These results suggest that not only is retail ownership associated with a lower likelihood of receiving a comment letter, but when firms with higher retail ownership do receive a comment letter the resolution of the issues is easier and quicker. Together, these findings imply that DCF is more likely to allocate resources and apply its financial reporting oversight role to companies with lower retail ownership. This is in contrast with public statements and other initiatives of the SEC claiming to protect retail investors.

Next, we examine whether retail ownership is associated with enforcement by DOE in the form of an AAER. We first examine the relation between the issuance of an AAER to a corporation related to financial reporting issues and the proportion of retail ownership at the firm in an unconditional sample (similar to Heese (2019)). Here we find no association between retail ownership and the issuance of an AAER. However, the issuance of an AAER related to financial reporting issues first requires that the firm engage in some financial reporting behavior that might warrant an AAER. Thus, to address this issue and partially mitigate the concern that the issuance

of an AAER and retail ownership are endogenously determined we next condition on the presence of a financial statement restatement. We then investigate whether there is an association between retail ownership and the issuance of an AAER for restating firms.

We identify all restatements that fall between January 1, 2001 and September 30, 2014 from Audit Analytics. We then determine whether an AAER was filed during the two years following the restatement date. From there we use this sample of firms that filed a financial statement restatement and estimate a probit regression model of the likelihood of an SEC enforcement action (AAER) on the prior year's retail ownership. We follow prior literature and include a comprehensive set of control variables shown to be associated with the presence of an AAER (Rice, Weber, and Wu, 2015).

The results of this analysis suggest a positive and significant association between retail ownership percentage and the likelihood of an AAER within two years following the restatement announcement. This finding implies that for firms that engage in a level of misreporting that rises to the degree of requiring a restatement, the SEC is more likely to pursue an enforcement action against firms that have a higher percentage of retail investors. This result contrasts with the unconditional AAER results and the comment letter results, and suggests that with regard to their interaction with corporate issuers through both DCF and DOE, the SEC's focus on retail investors is limited to the most public and egregious cases of perceived wrongdoing (i.e., following a restatement). This DOE result is consistent with SEC initiatives to protect the greatest number of investors and particularly the more vulnerable investors or those with insufficient resources to protect themselves.

Our results are subject to several caveats. First, we examine only two regulatory roles of the SEC. We do not consider the SEC's regulatory efforts within the functions of other major SEC

divisions or offices, such as investor education and advocacy or other regulatory mechanisms. We readily admit that these other divisions have instituted programs specifically designed at helping retail investors. However, the two divisions that we do focus on are the biggest in terms of full time employees and budgeted dollars, and they are the primary points of contact with the SEC for public corporations. Second, we are unable to observe the companies that are subject to a DCF review that does not result in the issuance of a comment letter or a DOE investigation that does not result in an AAER. Third, we are not able to observe the specific resource allocations to the oversight or enforcement of specific firms. Finally, SEC comment letters and restatements do not necessarily imply financial misreporting on the part of the firm, however, we do our best to control for other known determinants of comment letters and restatement characteristics to identify the effect of ownership characteristics on regulatory oversight and enforcement.

These caveats notwithstanding, our paper contributes to the academic literature on financial regulation by providing evidence on the extent to which the two largest divisions of the SEC consider the extent of retail ownership of a firm when they make resource allocation decisions. We document that DCF does not appear to allocate additional resources to the review and improvement of corporate filings of firms with a larger retail ownership percentage. However, when errors become so egregious that they rise to the level of a financial statement restatement DOE does appear to provide incremental resources to retail owned firms and is more likely to issue an AAER for these firms.

These findings contribute to the academic literature on SEC comment letters, which documents that several firm characteristics that are associated with firm-specific SEC oversight in the form of a comment letter. We find that in addition to firm characteristics, ownership characteristics also play a significant role in the SEC's resource allocation decisions within DCF

suggesting a greater focus on institutionally-owned firms over retail-owned firms. We also contribute to the academic literature on AAERs. Here again much of the focus is on firm specific characteristics and the evidence we provide suggests that in the face of a restatement ownership characteristics play a significant role in the SEC's resource allocation decisions within DOE. Taken together, the roles of DCF and DOE act as substitutes with respect to retail ownership, but only in cases where the alleged misreporting becomes particularly egregious. These findings provide evidence on the interaction between two public oversight and enforcement roles of the SEC.

Additionally, we compliment the literature on private enforcement. This literature finds that in the overall population of firm years (Cheng, Huang, Li, and Lobo, 2010) and conditional on the presence of a restatement (Files, Swanson, and Tse, 2009), the presence of an institutional owner who can serve as a lead plaintiff plays a big role in the formation of class-action suits. If lawsuits are generally initiated by institutional owners with the means and sophistication to access this private enforcement mechanism, there may be a role for public enforcement to step in and discipline firms who lack these institutional owners. In egregious cases of wrongdoing we find that the SEC and specifically DOE does indeed step in to fill this hole and focus their enforcement resources more on firms that have more retail ownership and less institutional ownership. This finding suggests that public and private enforcement mechanisms can actually work in tandem as substitutes to protect different segments of the investor population depending on the nature of the potential misreporting.

2. Background, literature review and hypothesis development

2.1 Background and literature review

The SEC consists of five larger functional units called divisions and 24 smaller functional units called offices. Each unit has distinct regulatory roles and functions. The two divisions that are the focus of this study are DCF and DOE. The three divisions that we do not focus on (the Division of Trading and Markets, the Division of Investment Management, and the Division of Economic and Risk Analysis) are involved in the regulation of the national exchanges, broker dealers, mutual funds, and policy research. In addition to the Division of Investment Management overseeing mutual funds, some of the SEC offices that are directly involved in protecting retail investors are the Office of the Investor Advocate and the Office of Investor Education and Advocacy. We acknowledge that these other offices explicitly consider retail investors in their regulatory efforts, however, we focus solely on DCF and DOE, because these divisions make up about 40% of the SEC's total budget in terms of both full time employees and dollars appropriated and they are the largest and most central to the SEC's interaction with corporate entities.

The actions of these two divisions have been the subject of several academic studies. These papers often examine the determinants of SEC monitoring and enforcement actions and primarily focus on firm characteristics. Cassell, Dreher, and Meyers (2013) finds that previous restatements or material weaknesses, stock volatility, low profitability, size, high complexity, and weak governance are all positively associated with the probability of receiving a comment letter. Kedia and Rajgopal (2011) finds that firms located closer to SEC offices are more likely to be subject to enforcement actions. Files (2012) finds that firms that cooperate with the SEC are more likely to be sanctioned via an enforcement action, but are also subject to smaller monetary penalties. Peterson (2012) finds that firms with more complex accounting are more likely to restate reported revenue, however, the accounting complexity mitigates the likelihood of receiving an AAER. In contrast to these studies that focus on firm characteristics, we investigate whether investor

characteristics (i.e., the percentage of retail ownership) of an individual firm influence the likelihood of being subject to an SEC comment letter or an AAER.

There are papers that examine the relation between aspects of other individuals involved with firms and SEC activity. Specifically, Correia (2014) and Yu and Yu (2011) both find evidence of a negative relation between political connections of top management and enforcement actions issued by DOE. However, as it relates to comment letters coming from DCF, Heese, Khan, and Ramanna (2017) discuss the tradeoff between the functions of DCF and DOE relating to regulatory capture. They find that in contrast to the prior literature on DOE, political connections *positively* predict SEC comment letters from DCF. They further encourage researchers to examine the interaction between the regulatory roles of these two primary SEC divisions. We examine characteristics of firm ownership instead of firm management (political connections) and investigate whether a similar tradeoff exists for regulatory incentives relating to ownership characteristics. However, it is less clear that the SEC would alter its interactions with corporate issuers on the basis of ownership characteristics especially given that identifying specific owners can be quite difficult.

2.2 Hypothesis development

At the time this draft is being written the main headline on the SEC website says "Focusing on Main Street" (https://www.sec.gov). This sentiment is echoed in many other speeches and public documents of the SEC and many activities of the SEC are clearly in line with the goal of serving and protecting retail investors. These initiatives include the establishment of the Office of Investor Education and Advocacy, the implementation of Regulation Fair Disclosure, and the free of cost dissemination of all corporate disclosure filings via the SEC's online EDGAR database to

name a few. Thus it is also possible and maybe even likely that this focus on retail investors permeates the resource allocation decisions of DCF and DOE.

Even though the SEC as a whole is quite vocal about the desired focus on retail investors, DCF does not publicly disclose its priorities as to which companies it will select as a target for the filing review process each year. The SEC website states, "To preserve the integrity of the selective review process, the Division does not publicly disclose the criteria it uses to identify companies and filings for review" (SEC 2019). Companies do know, however, that under SOX 408, their periodic filings will be subject to review at least once every three years, and although there are five explicit criteria for prioritizing these reviews, none of them are directly related to ownership characteristics. The five SOX 408 criteria are prior restatements, stock price volatility, market capitalization, emerging companies, and material operations to a sector of the economy.

If the priorities of DCF are consistent with public statements and other policies focused on retail investors, then we might observe a positive relationship between retail ownership and SEC monitoring. However, there may be offsetting or competing priorities such that retail ownership does not play a role. For this reason we state our first hypothesis in the null as follows:

> **H1**: *The level of retail ownership of the firm does not influence the likelihood that the firm is subject to regulatory monitoring in the form of an SEC comment letter.*

In contrast to DCF, The SEC is quite explicit about its priorities for DOE in its Enforcement Manual (SEC 2017). However, most of these priorities are ambiguous about whether they result in resource being allocated to protect retail investors.[4] For example, when determining the priority

[4] The nine criteria explicitly stated in the Enforcement Manual are as follows: 1) Whether the matter presents an opportunity to send a particularly strong and effective message of deterrence, including with respect to markets, products and transactions that are newly developing, or that are long established but which by their nature present limited opportunities to detect wrongdoing and thus to deter misconduct. 2) Whether the matter involves particularly egregious or extensive misconduct. 3) Whether the matter involves potentially widespread and extensive harm to investors. 4) Whether the matter involves misconduct by persons occupying positions of substantial authority or

for a potential investigation, the SEC Enforcement Manual states that the staff should consider whether the matter involves potentially widespread and extensive harm to investors. However, it is unclear whether the SEC staff would consider a firm with highly dispersed retail ownership as having a widespread impact or a firm with highly concentrated institutional ownership, where many of the shareholders are pensions or mutual funds who are investing on behalf of tens of thousands of individuals. Of all the priorities listed in the SEC Enforcement Manual, the one that most clearly points towards protecting retail investors is the consideration of whether the matter involves a substantial number of potential victims and/or *particularly vulnerable victims*.

The above discussion highlights the possibility that ownership characteristics might play a role in the decision process of whether or not to pursue an enforcement action against a firm. However, it also addresses reasons why those characteristics might not enter the decision process or that some of the differing priorities are likely to conflict with one another. For this reason we state our second and last hypothesis in the null as follows:

> **H2**: *The level of retail ownership of the firm does not influence the likelihood that the firm is subject to regulatory enforcement in the form of an AAER.*

3. Research design

Our first hypothesis (H1) investigates the relation between retail ownership and the likelihood of receiving an SEC comment letter. We build on prior literature that has developed models for the determinants of receiving an SEC comment letter driven primarily by the SOX

responsibility, or who owe fiduciary or other enhanced duties and obligations to a broad group of investors or others. 5) Whether the matter involves potential wrongdoing as prohibited under newly-enacted legislation or regulatory rules. 6) Whether the potential misconduct occurred in connection with products, markets, transactions or practices that pose particularly significant risks for investors or a systemically important sector of the market. 7) Whether the matter involves a substantial number of potential victims and/or particularly vulnerable victims. 8) Whether the matter involves products, markets, transactions or practices that [DOE] has identified as priority areas. 9) Whether the matter provides an opportunity to pursue priority interests shared by other law enforcement agencies on a coordinated basis.

Section 408 factors (Cassell, Dreher, and Meyers, 2013; Heese, et al. 2017). We then add both the percentage of retail ownership and the percentage of insider ownership to this model as seen below in Equation (1).

$$Pr\ (10K\ Comment = 1) = \beta_0 + \beta_1 Retail\% + \beta_2 Insider\% + \beta_3 Restate + \beta_4 Lag\ Restate + \beta_5 Size + \beta_6 Sales\ Growth + \beta_7 MTB + \beta_8 Firm\ Age + \beta_9 Loss + \beta_{10} Low\ MTB + \beta_{11} ZScore + \beta_{12} M\&A + \beta_{13} Restructuring + \beta_{14} External\ Financing + \beta_{15} Lit\ Industry + \beta_{16} BIG4 + \beta_{17} High\ Volatility + \beta_{18} CEO\ Chair + \beta_{19} CEO\ Tenure + \delta_t + \varepsilon \quad (1)$$

We estimate this model for the unconditional sample of firm-year observations that have all data necessary to calculate the requisite variables.[5] The dependent variable, *10K Comment,* is a binary variable that equals 1 if a firm received a comment letter referencing their 10-K in the given year and zero otherwise. The variable of interest is *Retail%* which is the total retail ownership of the firm at the end of the prior year. Specifically, *Retail%* is computed by adding total institutional ownership and total insider ownership and assuming the remaining ownership is composed of retail owners (i.e. *Retail%* = 1 – (*Inst%* + *Insider%*)). *Inst%* is measured using the Thomson S13 database and *Insider%* is measured using the Execucomp database. Because we also include *Insider%* in the regression we are able to interpret the coefficient estimate on *Retail%* as the impact of adding increasing retail ownership at the expense of institutional ownership.[6]

Control variables included in the regression are as follows. We include a binary variable that equals 1 if a firm has restated its financial statements in the current year (*Restate*) and another if the firm has restated its financial statements in the prior year (*Lag Restate).* We include the log of the firm's market capitalization *(Size)*, and a binary variable that equals 1 if the volatility of the abnormal monthly stock returns for the firm over the prior year is in the top

[5] All variables are described in detail in Appendix B.
[6] Standard errors are clustered by firm as we only have either 10 or 13 years of data which is an insufficient number of clusters and can result in erroneous inferences (Petersen 2009).

quartile for that year (*High Volatility)*. These are all factors that are used in the SEC review process according to SOX Section 408. We also include the firm's market-to-book ratio (*MTB)* and a separate binary variable equal to 1 when a firm's market-to-book ratio less than 1 (*Low MTB)* to control for a non-linear effect of the firm's growth expectations. We include the logarithm of the firm's age (*Firm Age)* as younger firms may have a higher tendency to misreport (Beneish 1997). Profitable firms generally have higher reporting quality. As such, we include a binary variable that equals 1 when the company reports a loss in net income in the current year (*Loss).* To control for the firm's level of financial distress, we include Altman's Z-Score (*Zscore*). The complexity of a company is positively associated with the likelihood of a review (Cassell, et al. 2013). As a result, we include the year-to-year sales growth (*Sales Growth),* a binary variable that equals 1 when the firm engaged in a merger or acquisition (*M&A),* and a binary variable that equals 1 if the firm went through restructuring (*Restructuring)*. We include a firm's subsequent debt and equity issuance (*External Financing),* because firms with external financing needs are more likely to comply with disclosure rules (Ettredge, Johnstone, Stone, and Wang 2011). We include the litigious industry variable (*Lit Industry)* developed by Francis, Philbrick, and Schipper (1994) in order to control for industries that are subject to high scrutiny. Because clients of Big 4 auditors might commit fraud at a lower rate (DeFond 1992), we include a binary variable that equals 1 if the firm was audited by a Big 4 auditor (*BIG4*). In order to control for differences in corporate governance structures, we include a binary variable that is equal to 1 if the CEO is the board chair (*CEO Chair)* and a variable measuring the length of the CEO's tenure (*CEO Tenure).*

After examining the relation between the unconditional probability of receiving a comment letter and retail ownership percentage we examine two characteristics of the comment review

process in an effort to strengthen our inferences. Conditional on receiving a comment letter there is variation the both the number of rounds needed to satisfy the SEC's inquiry and the total duration of the comment letter process. If there is a true underlying relation between retail ownership and resource allocation by DCF through the comment letter process then we would expect that relation to be evident for these two cross sectional characteristics. In order to test these relations we modify equation (1) by replacing *10K Comment* with either *Rounds* or *Time*. *Rounds* is the number of letters from the SEC, from the first letter to the "completion of review" letter, and *Time* is the logarithm of one plus the number of days between the first letter and the "completion of review" letter.

Our second hypothesis (H2) investigates the relation between retail ownership and the likelihood of receiving an AAER from DOE. We investigate this relation with two separate research designs. We first test this relation in unconditional sample similar to the comment letter analysis. Specifically, we estimate the probit model presented below as Equation (2).

$$Pr\ (AAER = 1) = \beta_0 + \beta_1 Retail\% + \beta_2 Insider\% + \beta_3 Size + \beta_4 MTB + \beta_5 Firm\ Age + \beta_6 ZScore + \beta_7 BIG4 + \beta_8 Fscore + \beta_9 Analyst + \beta_{10} Fortune\ 500 + \beta_{11} ROA + \beta_{12} Leverage + \beta_{13} Abnormal\ Revenue\ Growth + \beta_{14} Mod.\ Jones\ Disc.\ Acc. + \delta_t + \varepsilon \quad (2)$$

We estimate this model for the unconditional sample of firm-year observations that have all data necessary to calculate the requisite variables. The dependent variable, *AAER,* is a binary variable that is equal to 1 during the misstatement period as reported in the AAER, and zero otherwise (Heese 2019). We make this design choice because we want to capture the potential determinants of DOE's resource allocation decision at the time an investigation has the potential to begin. Heese (2019) provides evidence that investigations are typically initiated during the misstatement period. This coupled with the fact that the release of the AAER lags behind the start of the enforcement

period by an average of over 50 months leads us to this design choice (Karpoff, Lee, and Martin 2008).

The variable of interest is again *Retail%* which is defined the same as in the comment letter tests described above. We again also include *Insider%* which allows for the interpretation on *Retail%* as the effect of trading off institutional ownership for retail ownership. In addition to the ownership variables, we include other control variables in our regression found by prior literature to impact the decision of DOE to pursue an enforcement action (Heese 2019). Many of these variables are identical to the variables described in the comment letter analyses. The additional variables are as follows. To further control for the firm's level of financial distress we include their leverage ratio (*Leverage*). We control for firms' financial reporting behavior by including the F-score as developed in Dechow, Ge, Larson, and Sloan (2011), as this measure is shown to predict AAERs (*Fscore*). To control for the firm's level of visibility, we include controls for the natural logarithm of the number of analysts issuing earnings forecast for the firm during the year (*Analyst*) and an indicator variable that equals 1 if the firm was included in the Fortune 500 index (*Fortune 500*). We control for the firm's financial performance by including their return on assets (*ROA*). Brazel, Jones, and Zimbelman (2009) find that the difference between the percentage change in revenues and the percentage change in number of employees predicts AAERs, so we control for this measure (*Abnormal Revenue Growth*). Finally, we control for the firm's level of earnings management by including a control for their level of discretionary accruals, as measured using the Modified Jones Model (Dechow, Sloan, and Sweeney 1995) (*Mod. Jones Disc. Acc.*).

We realize that differences in the extent of retail versus institutional ownership may affect the likelihood of a firm committing wrongdoing in the first place. For example, if institutional investors are effective monitors of firm behavior, then firms where institutions own a large stake

may be less likely to misreport. This would result in differences in the observable enforcement actions even though it does not represent differences in DOE's allocation of resources. In an effort to mitigate this concern as well as to focus on egregious cases of wrongdoing where retail investors may particularly require SEC enforcement we next examine only the subsample of firm-years that were subject to a financial statement restatement. After conditioning on apparent wrongdoing, we argue that the endogeneity concern described above becomes less salient.

To execute this test we obtain the full sample of firms that had a financial statement restatement during the sample period. We then estimate the following probit model:

$$Pr\ (AAER = 1) = \beta_0 + \beta_1 Retail\% + \beta_2 Insider\% + \beta_3 Restate\ Magnitude + \beta_4 Restate\ Revenue + \beta_5 Restate\ Count + \beta_6 Restate\ Years + \beta_7 CAR + \beta_8 Previous\ Return + \beta_9 Share\ Turnover + \beta_{10} Size + \beta_{11} Sales\ Growth + \delta_t + \varepsilon \quad (3)$$

The dependent variable, *AAER*, is a binary variable that is equal to 1 if a firm (or its managers) are the recipient of an AAER in the two years after a restatement, and 0 otherwise. We choose a two-year period after considering two competing requirements. First, we need a short enough period so that it is likely that the AAER results from the restatement. This ensures that the restatement severity controls in the regression are relevant in predicting an AAER. Second, we need a long enough period so that the SEC is able to investigate a firm's misreporting and issue an AAER, if necessary. We believe the two-year period is best able to capture both of these requirements. All results in the paper are robust to instead using a 3-year post restatement window to identify AAERs.[7]

We again include *Retail%* as the main variable of interest and *Insider%* for ease of interpretation of the coefficient estimate on *Retail%*. In addition to our variables of interest, we include a variety of other control variables in the regression following Rice, et al. (2015). First, we

[7] Blackburne, Bozanic, Johnson, and Roulstone (2019) document that the average duration for an SEC investigation is roughly 2 years.

include several variables which are related to the severity of the restatement. These include the cumulative change in net income as a result of the restatement (*Restate Magnitude*), a binary variable for if revenue is restated (*Restate Revenue*), the number of accounts that are restated (*Restate Count*), the number of years which are being restated (*Restate Years*), and the 2-day abnormal market reaction to the restatement announcement (*CAR*). Next, we include the firm's returns in the lead up to the restatement in order to control for the amount of losses incurred by stockholders (*Previous Return*). We include the natural log of the firm's market capitalization at the end of the restatement period (*Size*) in order to control for the tendency of large firms to be enforcement targets. Finally, we include the share turnover in the lead up to the restatement (*Share Turnover*) and the sales growth in the last misstated year (*Sales Growth*).

4. Sample selection and descriptive statistics

4.1 Sample selection

The unconditional comment letter and AAER samples both begin with the Compustat universe during fiscal years 2005 through 2014. We begin the sample in 2005, because comment letter data is not available until 2005 and we end the sample in 2014 to be consistent with the conditional AAER analysis. We delete observations with non-positive assets as these may result from errors in the database. Table 1 summarizes the full sample selection process.

We use data from the CRSP, Thomsen-Reuters, and Execucomp in both samples. In addition, we use data from the CFRM and IBES in the unconditional AAER sample. We eliminate observations that are missing the requisite data. Finally, we eliminate financial firms (SIC 6000-6999) due to their unique regulatory structure. Our final comment letter sample is composed of

12,580 firm-year observations, and our final unconditional AAER sample is composed of 10,628 firm-year observations.

The conditional AAER sample begins with the universe of restatements from Audit Analytics with filing dates from January 1, 2001 through September 30, 2014. We end the sample at this time, because we require two years after the restatement to observe any potential AAER, and the AAER data from the Center for Financial Reporting and Management is available through September 30, 2016.[8] We eliminate restatement observations with Audit Analytics filing dates that are prior to the end of the misstatement period. We further delete observations with non-positive assets as these may result from errors in the database. In order to reduce the likelihood that multiple restatements are linked to the same AAER, we retain only the first restatement observation in a given fiscal year. Our final sample is composed of 1,393 restatement observations. Table 1 summarizes the full sample selection process.

4.2 Descriptive statistics

Table 2, panel A presents descriptive statistics for the variables included in the comment letter analyses. Among this subsample of firm-years the average ownership by retail investors is 19.7% with institutions owning an average of 76.4% of the firm's shares and insiders owning an average of 4.7%. The sample firms receive a 10-K comment letter in 44% of the firm-year observations. This figure is slightly higher than the 34% reported in Heese, et al. (2017) which is likely due to the requirement of Execucomp data in order to calculate *Insider%*, which leads to the inclusion of relatively larger firms. When comparing the descriptive statistics to the subsample of firms in Heese, et al. (2017) with political connections (a subsample of firms that tend to be large), the difference in comment letter frequency disappears as do many other differences between the

[8] The data provided by the CFRM was originally collected in Dechow, et al. (2011).

two samples. Finally, the average comment letter requires 1.6 rounds and 48 days to satisfy the SEC.

Table 2, panel B presents descriptive statistics for the variables included in the unconditional AAER analyses. Ownership characteristics for this sample are quite similar to that of the comment letter sample with retail, institutional, and insider owners comprising 19.8%, 75.9%, and 5.2% of the ownership interests on average, respectively. Confirming the rarity of an AAER issuance firms in our sample receive AAERs in only 0.2% of the firm year observations. Distributions of all controls are largely similar in magnitude to those found in the prior literature (Heese, 2019).

Table 2, panel C presents descriptive statistics for the variables included in the conditional AAER analyses. This sample includes one observation for each restatement. Ownership characteristics for this sample are again similar to that of the prior two samples with retail, institutional, and insider owners comprising 21.1%, 74.1%, and 5.4% of the ownership interests on average, respectively. After conditioning on the presence of a restatement the incidence of an AAER increases almost tenfold to 2.9%. Apart from our restatements being less severe on average (about -0.9% market reaction to the restatement versus -2.2% reported in Rice, et al. 2015) [9], the descriptive statistics presented in this panel are similar to prior literature.

5. Results

Table 3 presents the results from estimating Equation (1) which investigates the relation between retail ownership and the probability of an SEC comment letter. The coefficient estimate

[9] Palmrose, Richardson, and Scholz (2004) document median returns of -4.6% over the two-day announcement window. However, their sample is smaller and from the late 1990's when restatements were less common and more severe.

on *Retail%* is negative and significant at the 1% level across all three columns with a marginal effect of -.077 when including year and SEC office fixed effects in column 3. This negative association provides evidence to reject Hypothesis 1. The result shows that a higher percentage of retail ownership is associated with a lower likelihood of receiving an SEC comment letter. In terms of economic magnitude, a one standard deviation increase in *Retail%* is associated with a 1.36 percentage point decrease in the probability of receiving a comment letter, which corresponds to a 3.1 percent decrease relative to the sample mean. As a benchmark, a one standard deviation increase in firm size is associated with a 10.40 percentage point increase in the probability of receiving a comment letter, which corresponds to a 24 percent increase relative to the sample mean. This evidence suggests that ownership characteristics do play a role when the SEC decides which firms will be the subject to regulatory oversight and monitoring from DCF. These findings imply that DCF is more likely to allocate resources and apply its financial reporting oversight role to companies with lower retail ownership. This is in contrast with public statements and other initiatives of the SEC claiming to protect retail investors.

Table 4 presents the results from estimating Equation (1) where the two dependent variables are the number of rounds (columns 1-3) and the calendar time needed to resolve the SEC comments (columns 4-6), conditional on the receipt of an SEC comment letter. We consistently find a negative and significant association at the 5% level or better between *Retail%* and the number of rounds and the time needed to resolve the SEC comments. This evidence provides further evidence to reject Hypothesis 1. In terms of economic magnitude, a one standard deviation increase in *Retail%* is associated with a 2.29 percentage point decrease in the number or rounds and a 2.32 percentage point decrease in the time needed to resolve the comments. As a benchmark, a one standard deviation increase in firm size is associated with a 7.11 percentage point increase

in the number of rounds and a 5.70 percentage point increase in the time needed to resolve the comments. This evidence suggests that even conditional on the receipt of an SEC comment letter, ownership characteristics continue to play a role in the intensity of the regulatory oversight and monitoring from DCF. Taken together, the combined results in Table 3 and 4 suggest that not only is retail ownership associated with a lower likelihood of receiving a comment letter, but when firms do receive a comment letter the resolution of the issues is easier and quicker.

Table 5 presents the results from estimating Equation (2) which investigates the relation between retail ownership and the probability of an AAER in our unconditional sample. Here we fail to find a significant association between retail ownership percentage and the unconditional likelihood of an AAER across all three columns. This null result is evidence against rejecting Hypothesis 2, suggesting that ownership characteristics do not play a significant role in the DOE staff's decision as to which firms they will pursue for enforcement actions. However, we further examine this hypothesis after conditioning on a financial statement restatement, which is a proxy for alleged misreporting.

Table 6 presents the results from estimating Equation (3) which investigates the relation between retail ownership and the probability of an AAER, conditional on a restatement. The coefficient estimate on *Retail%* is positive and significant at the 5% level or better across all three columns with a marginal effect of 0.059 when including year fixed effects in column 3. This positive association provides evidence in support of rejecting Hypothesis 2. This result shows that a higher percentage of retail ownership is associated with a higher likelihood of receiving an AAER following a restatement. In terms of economic magnitude, a one standard deviation increase in *Retail%* is associated with a 1.04 percentage point increase in the probability of receiving an AAER, which corresponds to a 36 percent increase relative to the sample mean. As a benchmark,

a one standard deviation increase in firm size is associated with a 1.14 percentage point increase in the probability of receiving an AAER, which corresponds to a 39 percent increase relative to the sample mean. This evidence suggests that ownership characteristics do play a role when the SEC decides which firms will be the subject of their DOE enforcement actions. This finding implies that for firms that engage in a level of misreporting that rises to the degree of requiring a restatement, the SEC is more likely to pursue an enforcement action against firms that have a higher percentage of retail investors. This result contrasts with the unconditional AAER results and the comment letter results, and suggests that with regard to their interaction with corporate issuers through both DCF and DOE, the SEC's focus on retail investors is limited to the most public and egregious cases (i.e., following a restatement). This DOE result is consistent with SEC initiatives to protect the greatest number of investors and particularly the more vulnerable investors or those with insufficient resources to protect themselves.

6. Conclusion

This paper studies the effect of ownership characteristics on the likelihood that a firm is subject to SEC monitoring in the form of a comment letter and SEC enforcement in the form of an AAER. The SEC claims to primarily serve to protect "main street" investors, and in many of their initiatives they do just that. Examples include Regulation Fair Disclosure and investor education initiatives. However, what is less clear is whether that focus on retail investors also permeates the two primary divisions of the SEC: DCF and DOE. These divisions comprise the largest allocation of resources in terms of both budget and full time employees and are the primary points of contact with the SEC for public corporations. We address this specific issue and find that retail ownership is negatively associated with the likelihood of a firm receiving an SEC comment letter. Further,

conditional on the receipt of a comment letter, the number of rounds and time required to resolve the comments is expedited for high retail-owned firms. We also examine the association between retail ownership and the issuance of an AAER in an unconditional sample and conditional on potential wrongdoing in the form of a financial statement restatement. Although we do not find a significant association in the unconditional sample, conditional on a restatement, the SEC is more likely to issue an AAER against a firm if that firm has a higher proportion of retail ownership. Taken together, these results provide evidence that ownership characteristics do play a significant role in the SEC staff's oversight and enforcement decisions, and that there is a trade off in their efforts to protect retail versus institutional investors depending on the nature of the potential misreporting. The results also suggest that the SEC only steps in to protect retail investors in the most egregious cases (i.e. in the case of a financial restatement).

Prior literature on the determinants of SEC oversight and enforcement almost exclusively focuses on firm-level characteristics. We contribute to this literature by expanding the scope of potential determinants to include shareholder ownership characteristics on the likelihood of these two regulatory mechanisms. We provide novel evidence that the SEC trades off its regulatory focus on different subsets of investors depending on the nature of the potential misreporting. We view this study as an important step toward answering the call of Leuz and Wysocki (2016) in understanding the interaction between regulatory mechanisms. We hope that future research will continue to consider the relative tradeoffs among differing regulatory roles and further investigate the extent to which ownership characteristics play a role in decision making at the SEC.

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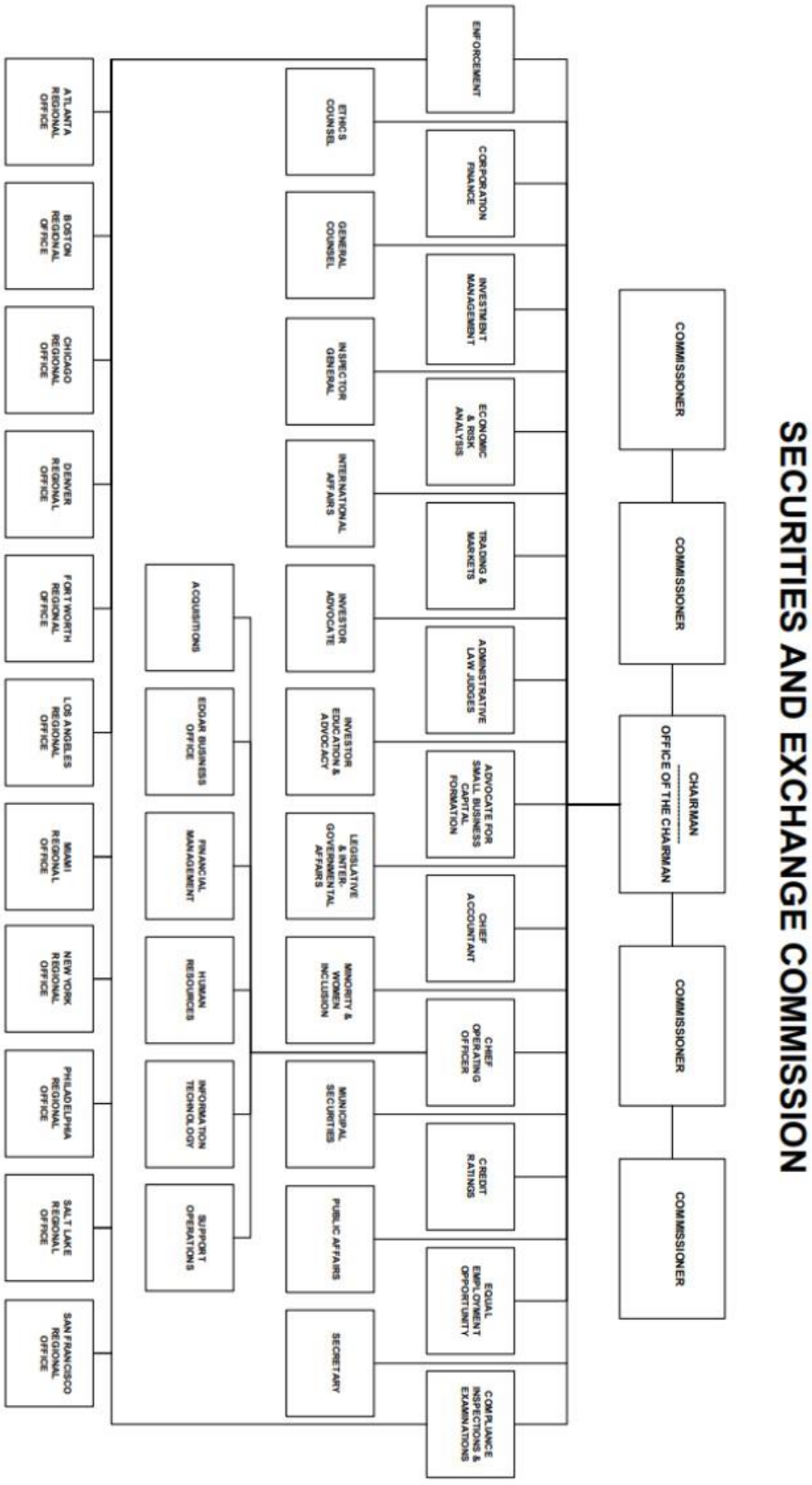
Appendix A: SEC Organization Chart



Appendix B: Variable Definitions

Insider %	Total shares owned by insiders at the end of the fiscal year scaled by total shares outstanding. Insider share data from Execucomp. Execucomp item: SHROWN_TOT. If missing SHROWN_TOT, we use SHROWN_EXCL_OPTS. These variables are summed for all insiders in the firm each year.
Institutional %	Average shares owned by institutions across the 4 quarters during the fiscal year scaled by total shares outstanding. Institutional share ownership data from Thomson Reuters.
Retail %	1 - Insider % - Institutional %.
10K Comment	A binary variable that equals 1 if a firm received a comment letter related to a 10-K during the fiscal year and zero otherwise.
Rounds	The number of back and forth iterations between the SEC and the registrant required to satisfy the SEC regarding a specific comment letter. This is measured as the number of letters from the SEC during each conversation, from the first letter to the "no further comment" letter.
Time	The logarithm of one plus the number of days between the first letter and the "no further comment" letter.
AAER_Unconditional	A binary variable that equals one during the misstatement period as reported in the AAER, and zero otherwise. Following Heese (2019).
AAER_Conditional	Binary variable that equals 1 if a firm was subject to an Accounting and Auditing Enforcement Release within the 2 years following a restatement, and zero otherwise.
Restate	A binary variable that equals one if the company filed a restatement within the past fiscal year.
Size	Natural log of common shares outstanding multiplied by price at the end of the fiscal year.
Sales Growth	Change in sales during the year scaled by beginning sales.
MTB	Common shares outstanding multiplied by price at the end of the fiscal year divided by the book value of common equity.
Firm Age	The number of years between the first appearance of the firm in Compustat and the current year
Loss	A binary variable that equals one if the firm reported negative net income.
Low MTB	A binary variable that equals one if the firm's market-to-book ratio is below one.
Zscore	Altman's Z-Score as measured in Altman (1968)
M&A	A binary variable that equals one if the firm engaged in any mergers or acquisitions during the fiscal year.
Restructuring	A binary variable that equals one if the firm had non-zero restructuring costs during the fiscal year.
External Financing	The sum of equity financing and debt financing scaled by total assets, measured in fiscal year t+1.

Appendix B: Variable Definitions (continued)

Lit Industry	A binary variable that equals 1 if a firm is in the four-digit SIC industry 2833–2836, 3570–3577, 3600–3674, 5200–5961, or 7370–7374.
BIG4	A binary variable that equal 1 if a firm was audited by Deloitte, PriceWaterhouseCoopers, EY, or KPMG.
High Volatility	A binary variable that equals one if the volatility of abnormal monthly stock returns within a firm's fiscal year is in the top quartile of that fiscal year.
CEO Chair	A binary variable that equals one if the CEO is also the chairman of the board of directors.
CEO Tenure	The number of years the CEO has served in his/her current role.
F-Score	Dechow, et al. (2011) F-Score. The F-Score is equal to the conditional probability of receiving an AAER divided by the unconditional probability. The conditional probability is e(predicted value) / (1 + e(predicted value), where the predicted value = -7.893 + 0.79 × RSST accruals +2.518 × Change in receivables+1.191 × Change in inventory + 1.979 × % Soft assets + 0.171 × Change in cashsales - 0.932 × Change in ROA + 1.029 × Actual issuance - 0.15 × Abnormal change in employees + 0.419 × Existence of operating leases + 0.082 × Market adjusted stock return + 0.098 × lagged market-adjusted stock return. The unconditional probability is misstating firm-years / (non-misstating firm-years + misstating firm-years).
Analyst	The natural logarithm of one plus the number of analysts following the firm.
Fortune 500	A binary variable that equals one if the firm is listed in the Fortune 500, and zero otherwise.
ROA	Income Before Extraordinary Items / Average Total Assets
Leverage	Long-term Debt / Average Total Assets
Abnormal Revenue Change	Percentage growth in revenue -– percentage growth in employees . Following Brazel, et al. (2009)
Mod. Jones Disc. Acc.	Discretionary accruals as measured by Tthe Modified Jones Model for calculating discretionary accruals. For more information, see Dechow, et al. (1995)
Restate Magnitude	The cumulative change in reported earnings due to the restatement, scaled by total market value of common equity at the end of the misstatement period
Restate Revenue	A binary variable that equals 1 if the restatement involves revenue recognition, and 0 otherwise.
Restate Count	The number of distinct account types being restated.
Restate Years	The length of the misstatement period in years
CAR	The cumulative abnormal return over the (0,1) period relative to the restatement announcement. Calculated as firm return minus the return on the CRSP equal-weight market index.

Appendix B: Variable Definitions (continued)

Previous Return	The buy-and-hold abnormal return over the (-252, -2) window relative to the restatement announcement date. Calculated using the CRSP equal-weight market index.
Share Turnover	1 - (Π 1 - (shares traded / total shares)), calculated over the (-252, -2) window relative to the restatement announcement.

Table1: Sample Selection

Table 1: Sample Selection

	Comment Letter Sample	Unconditional AAER Sample	AAER Sample
Total restatements between 1/1/01 - 9/30/14			14,199
Compustat firms 2005 - 2014	112,309	112,309	
Less:			
restatement period ends after the restatement date	-	-	(287)
require Compustat data	-	-	(5,102)
observations with non-positive assets	(21,989)	(21,989)	(369)
keep only one restatement per year	-	-	(747)
require CRSP data	(38,761)	(38,761)	(2,491)
require IBES data			
require institutional holdings data	(11,241)	(11,241)	(744)
require insider holdings data	(22,537)	(22,537)	(2,630)
eliminate financial firms (SIC 6000 - 6999)	(2,624)	(2,624)	(246)
missing control variables	(2,577)	(4,529)	(190)
Final Sample	12,580	10,628	1,393

Table 2: Summary statistics

Panel A: Comment Letter Sample

VARIABLES	(1) N	(2) Mean	(3) S.D	(4) p10	(5) p50	(6) p90
Insider%	12,580	0.047	0.101	0.002	0.016	0.108
Institutional%	12,580	0.764	0.18	0.52	0.799	0.969
Retail%	12,580	0.197	0.168	0	0.165	0.424
10K Comment	12,580	0.44	0.496	0	0	1
Rounds	5,529	1.618	0.91	1	1	3
Time	5,529	3.901	0.849	2.944	3.892	4.97
Restate	12,580	0.081	0.272	0	0	0
Lag Restate	12,580	0.078	0.269	0	0	0
Size	12,580	7.594	1.624	5.633	7.484	9.758
Sales Growth	12,580	0.087	0.208	-0.119	0.068	0.3
MTB	12,580	2.944	4.333	0.92	2.174	5.639
Firm Age	12,580	28.9	17.67	9	23	57
Loss	12,580	0.168	0.374	0	0	1
Low MTB	12,580	0.119	0.324	0	0	1
ZScore	12,580	4.107	3.98	0.967	3.256	8.141
M&A	12,580	0.237	0.425	0	0	1
Restructuring	12,580	0.418	0.493	0	0	1
External Financing	12,580	-0.021	0.108	-0.129	-0.023	0.086
Lit Industry	12,580	0.308	0.462	0	0	1
BIG4	12,580	0.923	0.267	1	1	1
High Volatility	12,580	0.25	0.433	0	0	1
CEO Chair	12,580	0.516	0.5	0	1	1
CEO Tenure	12,580	6.919	7.268	1	5	16

Panel B: Unconditional AAER Sample

VARIABLES	(1) N	(2) Mean	(3) S.D	(4) p10	(5) p50	(6) p90
Insider%	10,628	0.052	0.113	0.003	0.019	0.116
Institutional%	10,628	0.759	0.186	0.509	0.794	0.970
Retail%	10,628	0.198	0.170	0.000	0.166	0.425
AAER	10,628	0.002	0.049	0	0	0
Size	10,628	7.464	1.622	5.514	7.349	9.643
MTB	10,628	2.899	3.385	0.883	2.164	5.645
Firm Age	10,628	28.141	17.241	10	22	57
ZScore	10,628	4.141	4.044	0.920	3.271	8.356
BIG4	10,628	0.909	0.288	1	1	1
Fscore	10,628	1.010	0.518	0.418	0.928	1.709
Analyst	10,628	1.925	1.110	0.000	2.197	3.135
Fortune 500	10,628	0.237	0.425	0	0	0
ROA	10,628	0.043	0.100	-0.050	0.051	0.138
Leverage	10,628	0.203	0.184	0.000	0.180	0.449
Abnormal Revenue Growth	10,628	0.034	0.193	-0.146	0.030	0.212
Mod. Jones Disc. Acc.	10,628	-0.009	0.079	-0.093	-0.007	0.075

Panel C: AAER Sample

VARIABLES	(1) N	(2) Mean	(3) S.D.	(4) p10	(5) p50	(6) p90
Insider%	1,393	0.054	0.117	0.002	0.014	0.132
Institutional%	1,393	0.741	0.193	0.466	0.772	0.962
Retail%	1,393	0.211	0.177	0.000	0.181	0.456
AAER	1,393	0.029	0.167	0	0	0
Restate Magnitude	1,393	-0.010	0.040	-0.023	0.000	0.002
Restate Revenue	1,393	0.172	0.377	0	0	1
Restate Count	1,393	2.571	1.821	1	2	5
Restate Years	1,393	2.392	2.102	0.493	1.997	4.751
Size	1,393	7.108	1.471	5.293	6.995	9.156
Sales Growth	1,393	0.108	0.262	-0.133	0.074	0.363
CAR	1,393	-0.009	0.067	-0.075	-0.005	0.050
Previous Return	1,393	-0.035	0.474	-0.559	-0.077	0.497
Share Turnover	1,393	0.831	0.172	0.587	0.885	0.996

Notes: These tables present the summary statistics. Panel A presents statistics related to our comment letter tests. Panel B presents statistics related to our unconditional AAER test. Panel C presents statistics related to our conditional AAER test. See Appendix B for variable definitions.

Table 3: The effect of retail ownership on the likelihood of a comment letter

VARIABLES	(1) 10K Comment	(2) 10K Comment	(3) 10K Comment
Retail%	-0.316***	-0.186***	-0.196***
	(0.067)	(0.067)	(0.068)
Insider%	-0.105	-0.154	-0.157
	(0.097)	(0.100)	(0.104)
Restate	-0.003	0.061	0.056
	(0.043)	(0.043)	(0.043)
Lag Restate	-0.056	-0.013	-0.009
	(0.042)	(0.042)	(0.042)
Size	0.140***	0.159***	0.163***
	(0.008)	(0.009)	(0.009)
MTB	-0.004	-0.001	-0.000
	(0.004)	(0.004)	(0.003)
Firm Age	-0.000	0.000	-0.000
	(0.001)	(0.001)	(0.001)
Loss	0.019	0.012	0.040
	(0.036)	(0.036)	(0.036)
Low MTB	0.063	0.045	0.052
	(0.041)	(0.042)	(0.042)
ZScore	-0.016***	-0.014***	-0.013***
	(0.003)	(0.003)	(0.003)
Sales Growth	0.012	0.072	0.093
	(0.059)	(0.062)	(0.063)
M&A	-0.065**	-0.003	0.002
	(0.027)	(0.029)	(0.029)
Restructuring	0.066***	0.071***	0.074***
	(0.023)	(0.024)	(0.025)
External Financing	0.060	0.051	0.049
	(0.109)	(0.110)	(0.112)
Lit Industry	0.018	0.013	0.007
	(0.024)	(0.025)	(0.030)
BIG4	-0.086**	-0.103**	-0.103**
	(0.041)	(0.041)	(0.042)
High Volatility	-0.004	0.025	0.023
	(0.029)	(0.029)	(0.029)
CEO Chair	0.004	-0.017	-0.022
	(0.024)	(0.024)	(0.024)
CEO Tenure	0.000	0.001	0.002
	(0.002)	(0.002)	(0.002)
Constant	-1.008***	-1.277***	-1.347***
	(0.073)	(0.084)	(0.098)
Observations	12,580	12,580	12,419
YEAR FE	NO	YES	YES
OFFICE FE	NO	NO	YES

Note: This table presents the results from a probit regression where the dependent variable is one if the firm received a comment letter related to a 10-K within the next year. *Insider%* is the total shares owned by firm insiders at the end of the prior fiscal year scaled by total shares outstanding. *Retail%* is the percentage of shares owned by retail investors at the end of the prior fiscal year. See Appendix B for all other variable definitions. *, **, and *** Indicate significance at the 10, 5, and 1% levels. Standard errors in parentheses. Standard errors are clustered by firm.

Table 4: The effect of retail ownership percentage on the number of rounds and duration of a comment letter cycle

VARIABLES	(1) Rounds	(2) Rounds	(3) Rounds	(4) Time	(5) Time	(6) Time
Retail%	-0.210***	-0.162**	-0.141*	-0.163**	-0.142**	-0.143**
	(0.072)	(0.072)	(0.072)	(0.069)	(0.069)	(0.066)
Insider%	0.057	0.023	0.027	0.034	0.014	0.025
	(0.123)	(0.118)	(0.117)	(0.104)	(0.102)	(0.095)
Restate	-0.012	0.012	0.020	-0.004	0.006	0.009
	(0.040)	(0.040)	(0.040)	(0.038)	(0.038)	(0.038)
Lag Restate	-0.055	-0.027	-0.019	-0.025	-0.014	-0.016
	(0.042)	(0.042)	(0.042)	(0.040)	(0.040)	(0.041)
Size	0.051***	0.051***	0.044***	0.057***	0.058***	0.035***
	(0.010)	(0.010)	(0.010)	(0.009)	(0.009)	(0.008)
MTB	-0.003	-0.002	-0.003	0.000	0.002	0.002
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Firm Age	0.000	0.000	0.001	-0.001	-0.001	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Loss	0.018	0.018	0.011	0.022	0.019	-0.006
	(0.036)	(0.035)	(0.035)	(0.032)	(0.032)	(0.032)
Low MTB	0.018	0.004	0.007	0.071*	0.079**	0.069*
	(0.042)	(0.042)	(0.043)	(0.037)	(0.037)	(0.037)
ZScore	-0.006*	-0.005	-0.004	-0.002	-0.002	-0.000
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Sales Growth	0.025	0.151**	0.128**	0.026	0.092	0.030
	(0.060)	(0.063)	(0.064)	(0.055)	(0.058)	(0.058)
M&A	0.089***	0.031	0.033	0.008	0.018	0.020
	(0.028)	(0.030)	(0.030)	(0.025)	(0.027)	(0.026)
Restructuring	0.001	0.000	-0.000	-0.021	-0.020	0.013
	(0.025)	(0.025)	(0.026)	(0.022)	(0.022)	(0.023)
External Financing	0.035	-0.009	-0.033	0.069	0.057	-0.096
	(0.109)	(0.108)	(0.109)	(0.104)	(0.104)	(0.102)
Lit Industry	0.018	0.011	0.053*	0.085***	0.084***	0.019
	(0.025)	(0.025)	(0.032)	(0.025)	(0.025)	(0.029)
BIG4	-0.071	-0.047	-0.034	-0.047	-0.051	-0.025
	(0.051)	(0.051)	(0.051)	(0.046)	(0.046)	(0.044)
High Volatility	0.088***	0.078**	0.066**	0.101***	0.099***	0.082***
	(0.030)	(0.030)	(0.031)	(0.028)	(0.028)	(0.027)
CEO Chair	0.018	0.020	0.016	0.014	0.007	0.006
	(0.025)	(0.025)	(0.025)	(0.024)	(0.024)	(0.023)
CEO Tenure	0.001	0.001	0.000	0.000	0.001	0.000
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)
Filings	0.133***	0.128***	0.129***	0.070***	0.064***	0.069***
	(0.015)	(0.015)	(0.016)	(0.010)	(0.010)	(0.011)
Issues	0.101***	0.114***	0.114***	0.119***	0.120***	0.123***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)
Constant	0.359***			2.588***		
	(0.097)			(0.084)		

Observations	5,529	5,529	5,452	5,529	5,529	5,452
R-squared	0.185	0.202	0.206	0.212	0.218	0.250
YEAR FE	NO	YES	YES	NO	YES	YES
OFFICE FE	NO	NO	YES	NO	NO	YES

Note: This table presents the results from a regression where the dependent variable is related to either the number of rounds in the comment letter review, or the time in days of the comment letter review. *Rounds* is the number of letters from the SEC, from the first letter to the "no further comment" letter. *Time* represents the logarithm of one plus the number of days between the first letter and the "no further comment" letter. *Insider%* is the total shares owned by firm insiders at the end of the prior fiscal year scaled by total shares outstanding. *Retail%* is the percentage of shares owned by retail investors at the end of the prior fiscal year. See Appendix B for all other variable definitions. *, **, and *** Indicate significance at the 10, 5, and 1% levels. Standard errors in parentheses. Standard errors are clustered by firm.

Table 5: The effect of retail ownership percentage on the unconditional likelihood of an AAER

VARIABLES	(1) AAER	(2) AAER	(3) AAER
Retail%	-0.568	-0.464	-0.185
	(0.987)	(0.841)	(0.757)
Insider%	0.181	-0.081	-0.029
	(0.440)	(0.461)	(0.459)
Size		-0.153**	-0.130**
		(0.068)	(0.065)
MTB		-0.004	-0.005
		(0.011)	(0.011)
Firm Age		0.002	0.002
		(0.010)	(0.010)
ZScore		0.015	0.014
		(0.015)	(0.016)
BIG4		0.069	0.053
		(0.215)	(0.222)
Fscore		0.354***	0.341***
		(0.084)	(0.086)
Analyst		0.064	0.083
		(0.057)	(0.064)
Fortune 500		-0.138	-0.210
		(0.354)	(0.371)
ROA		0.802	0.736
		(0.862)	(0.909)
Leverage		0.318	0.373
		(0.314)	(0.332)
Abnormal Revenue Growth		-0.251	-0.330*
		(0.166)	(0.172)
Mod. Jones Disc. Acc.		-1.352	-1.292
		(1.012)	(1.016)
Constant	-2.725***	-2.435***	-2.502***
	(0.212)	(0.521)	(0.515)
Observations	10,628	10,628	8,383
YEAR FE	NO	NO	YES

Note: This table presents the results from a probit regression where the dependent variable is one during the misstatement period as reported in the AAER, and zero otherwise. *Insider%* is the total shares owned by firm insiders at the end of the fiscal year scaled by total shares outstanding. *Retail%* is the percentage of shares owned by retail investors at the end of the fiscal year. See Appendix B for all other variable definitions. *, **, and *** Indicate significance at the 10, 5, and 1% levels. Standard errors in parentheses. Standard errors are clustered by firm.

Table 6: The effect of retail ownership percentage on the likelihood of an AAER after a financial statement restatement

VARIABLES	(1) AAER	(2) AAER	(3) AAER
Retail%	1.037**	1.587***	1.363**
	(0.453)	(0.465)	(0.557)
Insider%	-0.725	-0.098	-0.090
	(0.985)	(0.775)	(0.691)
Restate Magnitude		-2.259**	-1.969*
		(0.956)	(1.048)
Restate Revenue		0.416***	0.378***
		(0.114)	(0.129)
Restate Count		0.070***	0.058***
		(0.019)	(0.021)
Restate Years		0.055**	0.053*
		(0.027)	(0.029)
Size		0.144***	0.180***
		(0.048)	(0.055)
Sales Growth		-0.191	-0.425*
		(0.199)	(0.239)
CAR		-1.844	-1.593
		(1.257)	(1.297)
Previous Return		-0.413*	-0.291
		(0.236)	(0.236)
Share Turnover		0.951**	1.254***
		(0.407)	(0.381)
Constant	-2.124***	-4.724***	-4.852***
	(0.187)	(0.433)	(0.534)
Observations	1,393	1,393	1,068
YEAR FE	NO	NO	YES

Notes: This table presents the results from a probit regression where the dependent variable is one if the firm received an AAER within the 2 years following a restatement. *Insider%* is the total shares owned by firm insiders at the end of the prior fiscal year scaled by total shares outstanding. *Retail%* is the percentage of shares owned by retail investors at the end of the prior fiscal year. See Appendix B for all other variable definitions. *, **, and *** Indicate significance at the 10, 5, and 1% levels. Standard errors in parentheses. Standard errors are clustered by year.